January 1, 2012 to December 31, 2012

The Year in Review

WISCONSIN DEPT. OF NATURAL RESOURCES

2012 Office of the Great Lakes Highlights

Our Mission

The Office of the Great Lakes will chart the path towards an ecologically balanced system that recognizes the value and the shared stewardship of this tremendous resource. OGL will identify priorities with a clear, achievable approach to actions that leverage our shared values in the Great Lakes.

We continue to make significant strides in restoration, remediation and protection of our Great Lakes. In 2012, the hard work by our partners at the local, state and federal levels collectively implemented projects towards addressing contaminated sediments, fish and wildlife habitat, invasive species, and critical studies that will lead to delisting our five Areas of Concern in Wisconsin.

I thank the Great Lakes staff in the Central Office and the Districts for helping to implement the Great Lakes Restoration Initiative in Wisconsin. We are making a difference and I look forward to working with you all in the next year and years after as we continue the restoration and protection of these treasured resources – Lake Superior and Lake Michigan!

Please review the highlights for some notable successes in 2012.

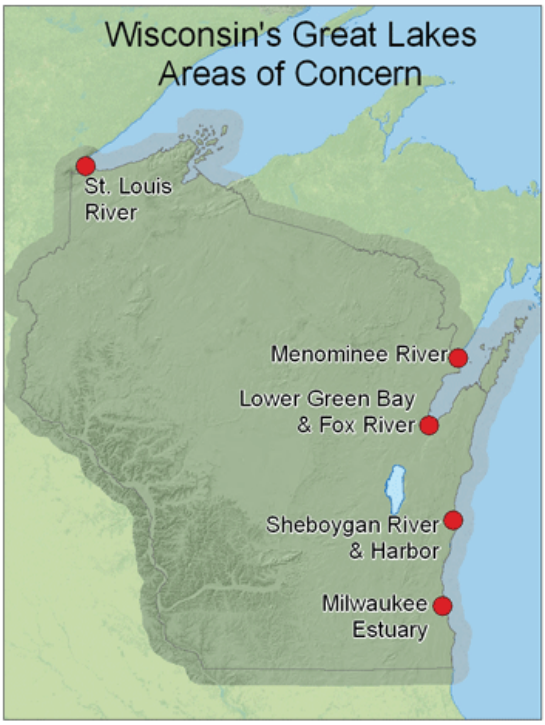
Steve Galarneau, Director

For more information on Wisconsin's five AOCs visit: http://dnr.wi.gov (Search AOCs)

Jerry Zajicek

Areas of Concern: RAP Update and BUI Evaluation

RAP Updates and Federal Funding



- Wisconsin's five Area of Concern Coordinators worked with local partners to prepare Remedial Action Plan (RAP) Updates which WDNR submitted to U.S. EPA's Great Lakes National Program Office (GLNPO) in December 2011. These actions served as the basis for negotiating a noncompetitive grant from GLNPO totaling $624,252 for wildlife consumption studies in Green Bay and Milwaukee (which had not been updated since 1987), a fish tumors study in the Milwaukee Estuary AOC, and a Habitat Coordinator position in the St. Louis River Area of Concern.

- WDNR updated the RAPs again in 2012 and they are the foundation for requesting both competitive and noncompetitive funds from federal agencies to support AOC projects in 2013 and beyond. RAP Updates also serve as a useful work planning tool for setting priorities and goals for the coming year.

Contact: Kendra Axness

Beneficial Use Impairment Evaluation

- Wisconsin DNR staff evaluated the "eutrophication or undesirable algae" beneficial use impairment (BUI) in the Sheboygan Area of Concern (AOC) and the results suggest that while conditions are not perfect, they are somewhat less impaired than they have been historically. In addition, dissolved oxygen levels were monitored with sufficient regularity and the levels never dropped below 0.5 mg/L. This result suggests that sufficient dissolved oxygen is present in the system. Finally, trends in cholorophyll-a suggest a statistically significant temporal decline.

- DNR staff along with federal and university partners have undertaken a thorough investigation of the "fish tumors and other deformities" beneficial use impairment in the St, Louis River, Sheboygan River, and Milwaukee River Areas of Concern. Representative samples of white suckers have been collected in the St. Louis River and Sheboygan River and a sampling effort will begin in the Milwaukee River in spring of 2013. In addition to sufficiently large samples sizes (~200 fish/location), all AOC white suckers collected were subject to stable isotope analyses. The stable isotope results will provide insight regarding the relative residence of white suckers within the AOC. Results thus far suggest relatively low tumor incidence rates in the St. Louis AOC and somewhat elevated tumor rates in the Sheboygan AOC. Further sampling is ongoing.

WDNR

Contact: Andy Fayram

AOCs: Lower Menominee River Area of Concern

Remediation of Contaminated Sites and Water Quality Monitoring

Ansul arsenic site. Photo: WDNR

- Ansul Incorporated, owned by Tyco International, began implementing an EPA approved work plan to remove sediment contaminated with high levels of organic arsenic from the bottom of the Menominee River.

- Wisconsin Public Service Corporation is executing the federally approved action to remove Non-Aqueous Phase Liquids (NAPL) and coal tar laden sediment from the Menominee River.

- The Michigan Department of Environmental Quality (MDEQ) used semi-permeable membrane devices to collect water quality data in the Menominee River and concluded that the Lower Scott Flowage could also be a source of contaminants. In a strong showing of intergovernmental cooperation, Wisconsin, using data collected by MDEQ, requested and received support through the Great Lakes Legacy Act to characterize sediment in the Flowage. Sediment characterization will begin in 2013.

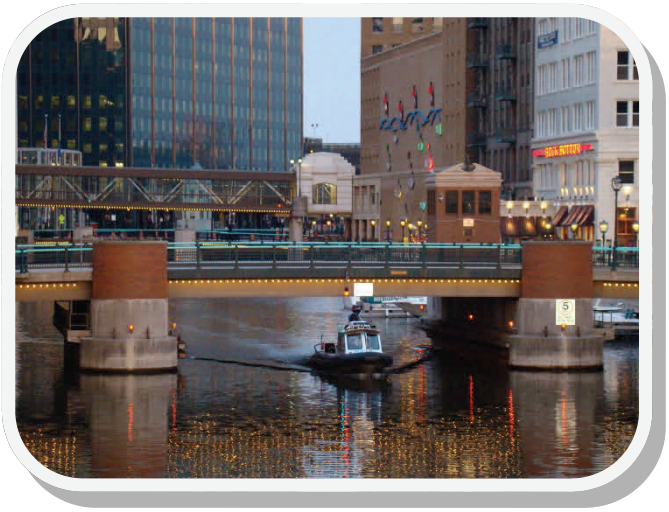
WPSC coal tar site. Photo: WDNR

Contact: Ben Uvaas

AOCs: Milwaukee River Estuary Area of Concern

Fish and Wildlife Population Assessment and Habitat Restoration Planning

- In an effort to address and remove the two impaired beneficial uses related to fish and wildlife, DNR assembled a team of stakeholders and began working immediately on two funding proposals to assess fish and wildlife populations in the AOC. If funded by EPA, the assessments will provide valuable information that will help direct the team to future priority projects that are necessary to rehabilitate critical species populations.
- The team of stakeholders also identified some priority projects as "green light projects" where there are clear benefits to fish or wildlife and there is a willing and able project lead. In 2013, we will continue to seek funding for these important habitat projects that will benefit fish and wildlife and also improve the quality of life for area residents.



Karen Gersonde

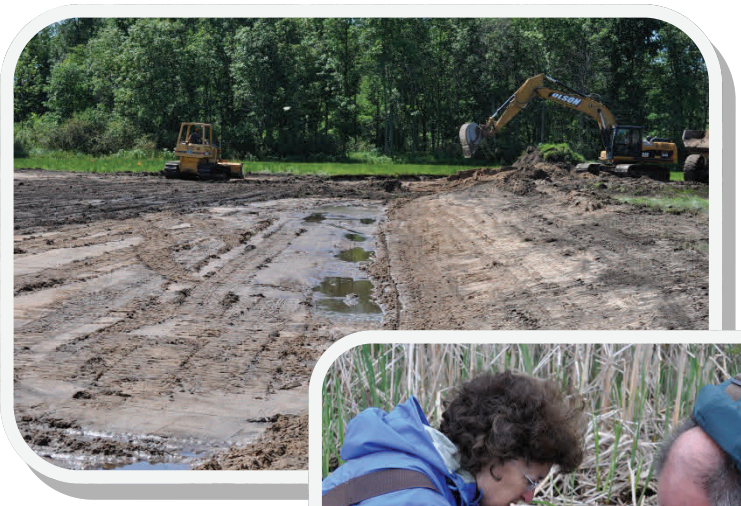
Contact: Megan O'Shea

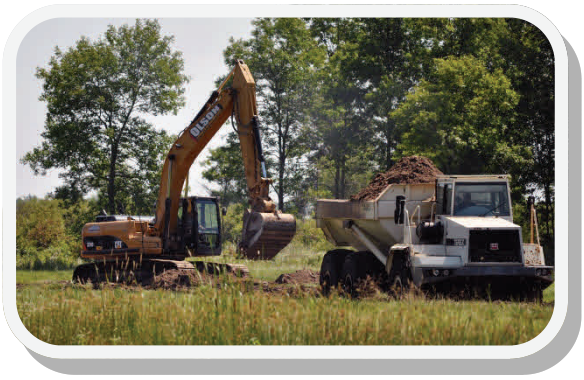
AOCs: Lower Green Bay and Fox River

Sediment Removal, TMDLs and Habitat Restoration

- Over 662,000 cubic yards of sediment were dredged from the AOC in 2012 as part of the Lower Fox River PCB Sediment Cleanup Project.
- EPA approved the Total Maximum Daily Load (TMDL) report establishing a "pollution budget" for total phosphorus and total suspended solids in the Lower Fox Watershed.
- Reconstruction of the Cat Island Chain began in 2012. Restoring the islands will lead to recovery of a significant portion of the lower bay habitat and will benefit sport and commercial fisheries, colonial nesting water birds, shorebirds, and other wildlife.
- Work continued on the Integrated Stream and Wetland Restoration Project focusing on the Duck-Pensaukee Watershed. Products include Release 2 of the Tributary and Coastal Wetland Decision Support Tool and the Watershed Approach Assessment and Prioritization Final Report (http://conserveonline.org/library search Duck Pensaukee).
- The Green Bay West Shore Northern Pike Habitat Project led by the Brown County Land and Water Conservation Department, also continued in 2012.
- Work began on the Coastal Wetland Restoration at the Point Sable Nature Preserve Project to restore approximately 114 acres of coastal wetlands and adjacent uplands at Point au Sable, a prominent peninsula that forms the northeast "corner" of the AOC.
- The Volunteer Aesthetics Monitoring Program was expanded in to include eleven monitoring sites throughout the AOC.

Contact: Laurel Last





Green Bay West Shore Northern Pike Habitat Restoration Project.

Photos: Jo Temte, WDNR

Sheboygan River Area of Concern Highlights

As of 2010, considerable progress had been made on contaminated sediment removal in the Sheboygan River Area of Concern. Because the project was poised to move forward, the AOC was given priority status by EPA, leading to significant actions toward delisting:

- The Rapid Ecological Assessment associated with the DNR fish and wildlife survey and assessment funded by $202,181 GRLI grant was completed in spring of 2012.
- Approximately 499,000 tons of contaminated sediment were removed from the Sheboygan River.
- Sheboygan River Superfund, Sheboygan River Great Lakes Legacy Act and Sheboygan Harbor navigational dredging projects were completed.
- Construction of habitat restoration projects funded by a $5.5 million GLRI grant was completed (Kiwanis Park Shoreline Restoration, Taylor Drive & Indiana Avenue Wetland Restoration, Wildwood Island Area Restoration, Shoreline Stabilization in Problem Areas, In-Stream Habitat Improvements).
- Sampling to evaluate fish tumor, benthos, plankton and waterfowl consumption advisory BUIs was carried out.
- In partnership with UWEX and Camp-Y-Koda, Explore and Restore expeditions, public outreach, and newsletters.engaged the community in Sheboygan River issues.

Contact: Stacy Hron

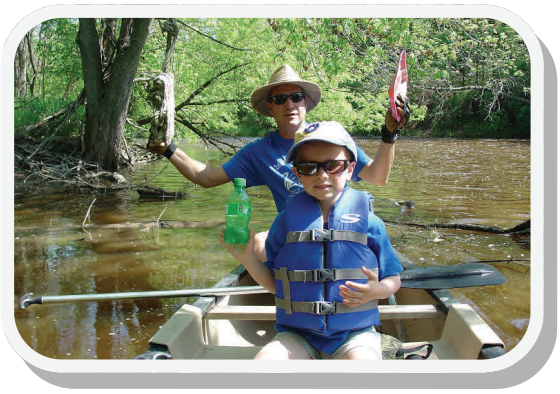
Monitoring kingfisher nesting burrows in a bluff with video camera. Photo: WDNR

Great Lakes Legacy Act dredging project crew removes contaminated sediment from the Sheboygan River. Photo: Stacy Hron, WDNR

Scows of sediment are unloaded, while the navigational dredging crew works in the background. Photo: Stacy Hron, WDNR

Naturalized shoreline protection is installed on Wildwood Island. This channel of the river was easily dammed and dewatered for construction due to the drought.

Photo: Stacy Hron, WDNR



A family participates in the Sheboygan River litter clean-up expedition.

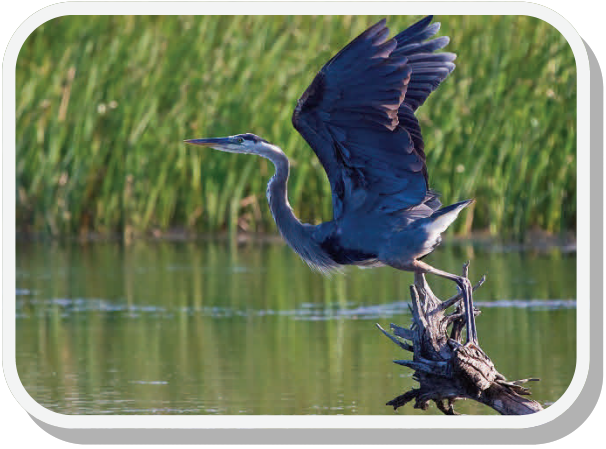
Photo: Deb Beyer, UWEX

Accomplishments: Lake Superior

Joanne Kline

- The Lake Superior LaMP Coordinator worked with approximately 30 land and water resource managers within the Lake Superior Basin to identify resource priorities and department actions for 2013-2014. This effort will help our agency focus actions on the local priorities and contribute to basin-wide efforts to protect and restore Lake Superior and the Great Lakes, as well as secure and effectively utilize Great Lakes Restoration Initiative Funding (GLFRI) currently available.

- The LaMP Coordinator teamed up with the DNR Wetland Monitoring Coordinator, to move the landscape level watershed wetland functional assessment work to the Lake Superior Basin with a focus of identifying priority wetland protection and restoration areas to slow the flow of overland runoff to ultimately decrease tributary erosion and sedimentation into Lake Superior. To further these efforts, the team applied for and was awarded an EPA Wetland Program Development Grant for $110,000 to conduct a wetland functional assessment within the Marengo River Watershed that will utilize and supplement the department's Marengo River Basin Plan and the Bad River Watershed Association's Marengo River Watershed Partnership Project Watershed Action Plan.



Wayne Rundell

- In 2012, Water Division OGL regional staff for Lake Superior volunteered to assist with leading an island restoration project by convening a cross-program project team with resource managers from wildlife, land, forestry, natural heritage inventory (NHI) and water to develop a restoration plan to seek an extension to the USFWS grant to June 30, 2014. In 2012, USFWS awarded the grant extension to conduct a conifer buffer restoration on the island, including baseline inventory of the island's terrestrial and aquatic resources. Project implementation began in the fall of 2012. This habitat restoration project will also contribute to the St. Louis River Area of Concern projects to address the Habitat Beneficial Use Impairment (BUI) and delisting needs identified.

Contact: Cherie Hagen

Accomplishments: Lake Michigan

- WDNR staff assists EPA with updates for the Lake Michigan Lakewide Management Plan (LaMP) Annual Report. This document highlights accomplishments, challenges, and next steps for environmental protection and restoration projects within the Lake Michigan basin. Numerous projects were highlighted for 2012, including invasive species control, fisheries restoration, beach health and watershed planning. The website for the 2012 Lake Michigan LaMP update is www.epa.gov/glnpo/lakemich/2012-lamp-report.pdf.

Accomplishments: Lake Michigan (continued from page 6)

- The Lake Michigan Stakeholders originated from a series of discussions between concerned citizens and Wisconsin DNR leaders. The first meeting was held in 2005 at Concordia College with over 40 participants representing a range of interests including federal, state and local units of government, universities, non-governmental organizations, tribal nations, and property owners. A membership survey is now sent annually to the almost 200 diverse members. The WDNR continues to support this group, serves on the steering committee, and is active in coordinating annual membership meetings.

- Planning began for the SoLM Conference which will be hosted by Wisconsin on October 16th and 17th, 2013 at the Blue Harbor Resort in Sheboygan. Funding for the conference is provided by EPA's Great Lakes National Program Office. The conference will highlight research and project activities that are critical to protecting and enhancing the health of Lake Michigan's ecosystem.

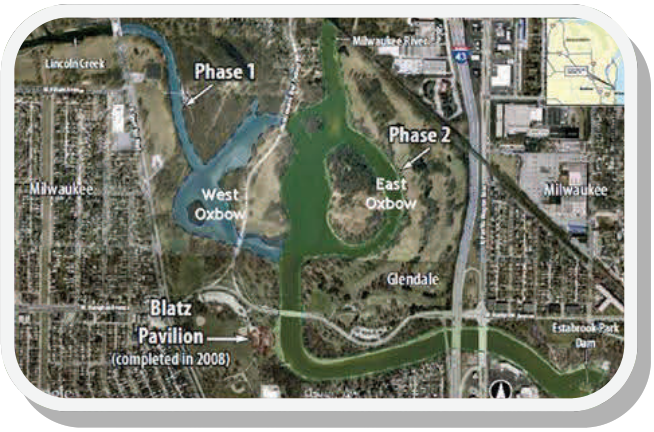
- WDNR staff assisted The Nature Conservancy with the planning and review of *The Lake Michigan Biodiversity Conservation Strategy*. This document was initiated to provide a more in depth assessment of the lake's biodiversity status and threats, as well as develop a comprehensive set of strategies to maintain and increase the viability of Lake Michigan's biodiversity and abate the threats to biodiversity

Contact: John Masterson

Milwaukee River PCB Sediment Cleanup

- In 2012 the WDNR, EPA and Milwaukee County completed the Phase 1 cleanup of PCB contaminated sediment in the Milwaukee River at Lincoln Park in Milwaukee. 120,000 cubic yards of PCB contaminated sediment were removed from the river in 2011 and early 2012 as part of a USEPA- Great Lakes National Program Office Legacy project to cleanup sediment contamination in the Great Lakes. WDNR provided the 35% local share of the $26 million project cost. The cleanup addressed the largest source of PCBs to the Milwaukee River estuary and will help to reduce PCB contamination in fish and wildlife in the basin. In addition to removing contaminated sediment the project restored nearly 3 miles of stream bank on the river to reduce bank erosion, to improve habitat in the park, and to improve public access.

Contact: Marsha Burzynski

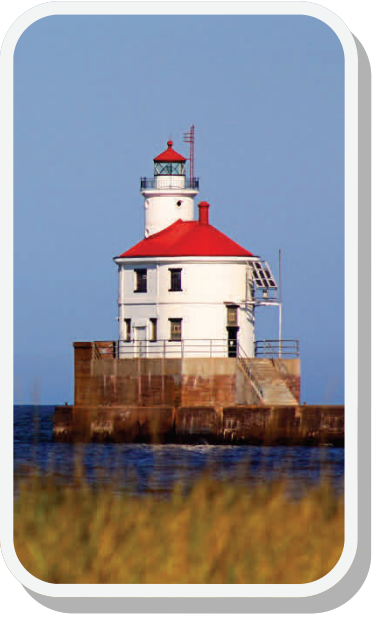


Milwaukee River at Lincoln Park **showing the project** phase area

Phase 1 sediment removal in the Milwaukee River

Ashland MGP Superfund Site

- The United States District Court entered approval in October 2012, of the consent decree between the United States and Northern States Power Company. Under the settlement Northern States Power Company will perform the on-land portion of the cleanup (Phase 1) at a former manufactured coal gas plant site (MGP). The cleanup will remove contaminated soil in The City of Ashland's wastewater treatment plant property and the upper bluff area, install a subsurface cut-off wall to keep coal tar contaminated water out of Lake Superior, and pump and treat contaminated ground water. The work is expected to take approximately two to three years to complete. Negotiations continue between the parties for performing and funding the cleanup of contaminated sediment (Phase 2) in Chequamegon Bay that is within the site. The Phase 1 work address the upland contamination and reduce the sub-surface flow of coal tar contaminated groundwater to Lake Superior.



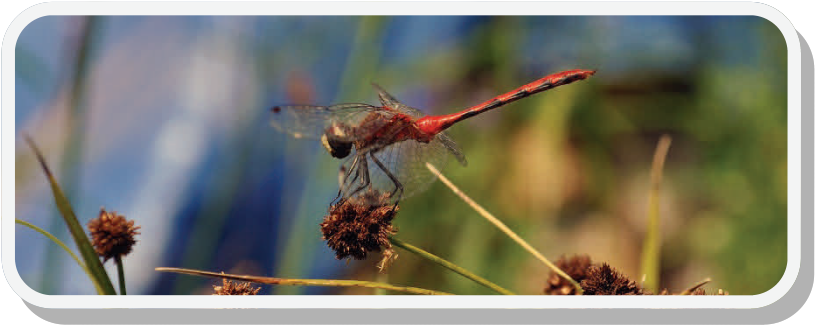
Randall Lee

Contact: Jamie Dunn

Great Lakes Outreach

- The OGL's 4th annual *Wisconsin's Great Lakes* Photo Contest and Writing Project received over 350 photos and seventeen poems.
- The 5th annual *Wisconsin's Great Lakes* Calendar was produced and 4,000 copies were distributed at State Fair and other events.
- Great Lakes and Drinking/Groundwater staff provided an interactive Great Lakes/Water Conservation exhibit at the 2012 State Fair.
- OGL, OC and regional staff and partners, produced videos about the tree swallow AOC contaminant study, Great Lakes Stopover Initiative, blue green algae and the Milwaukee River AOC.
- OGL and DNR Office of Communication (OC) staff added a DNR Great Lakes YouTube playlist and utilized social media (Facebook and Twitter) to promote Great Lakes videos.
- OGL and OC staff planned and facilitated three Lake Michigan "field experience" workshops for classroom teachers. Funded through a NOAA B-WET grant, the workshops were held in Milwaukee, Kenosha and Green Bay with 67 teachers attending.

Contact: Jo Temte



Jo Temte, WDNR